## What is claimed is:

1. A method for a gain control of a fiberoptic repeating system comprising:

mixing from a master repeater a modulated MODEM signal of a predetermined level with a RF signal and transmitting the mixed signal through an optical cable;

detecting at a slave repeater a modulated MODEM signal level from the mixed signal transmitted  $b_{V}$  the master repeater;

comparing the detected modulated MOREM signal level with a reference level and obtaining a difference between the levels; and

controlling a gain of an amplifier for the RF signal in the slave repeater based upon said obtained difference,

- 2. A method of claim 1, wherein the modulated MODEM signal is detected by a controller of the slave repeater.
- 3. A method of claim $\sqrt{1}$ , wherein the reference level is the predetermined level unless the master repeater transmits a control signal of a base station.

4. A method of claim 1, wherein controlling the gain of the amplifier to increase a level of the RF signal by the obtained 7 difference.



20

5

5. A method for a fiberoptic repeating system comprising: transmitting from a base station a first RF signal; amplifying the first RF signal by a constant level through an amplifier of a master repeater;

mixing a first modulated MODEM signal of a predetermined level with the first amplified RF signal and transmitting the mixed signal through an optical cable to a slave repeater;

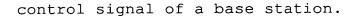
receiving and separating the mixed signal into a second modulated MODEM signal and a second RF signal, and detecting a modulated MODEM signal level from the second modulated MODEM signal;

comparing the detected modulated MODEM signal level with a reference level and obtaining a difference between the levels;

controlling a gain of an amplifier for the RF signal in the slave repeater based upon said obtained difference; and

amplifying the second RF signal according to the controlled gain and transmitting the second amplified RF signal to a terminal.

- 6. A method of claim 5, wherein the modulated MODEM signal level is detected by a controller of the slave repeater.
- 7. A method of claim 5, wherein the reference level is the predetermined level unless the master repeater transmits a



8. A method of claim 5, wherein controlling the gain of the amplifier for the RF signal in the slave repeater to increase a level of the second RF signal by the obtained difference.

14